

Having described the invention, the following is claimed:

1. A process for making a plastic sleeve having an internal diameter and a circumferential rib projecting inward from the internal diameter at one end of the sleeve and an external first groove aligned with the rib, the rib being for securing said plastic sleeve to a member having a second external groove for receiving the rib, the process comprising the steps of:

(a) feeding plastic into an extruder die;

(b) extruding the plastic from the extruder die as a molten plastic stream into a mold cavity having an inner wall with dimensions greater than the outside dimensions of the molten plastic stream, a first end of the inner wall including a first projection extending radially inward of the mold cavity and circumferentially completely around the mold cavity; and

(c) vacuum expanding the molten plastic stream radially against the mold cavity inner wall and around the projection to form a plastic sleeve with the circumferential rib and the aligned external first groove at one end of the plastic sleeve.

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2. The process of claim 1 wherein said inner wall further includes a second end and a corrugated portion between said first end and said second end, and said vacuum expanding step includes the step of expanding said plastic stream radially against the second end and the corrugated portions.

3. The process of claim 2 wherein said second end includes a second projection extending radially inward of the mold cavity and circumferentially completely around the mold cavity, and said vacuum expanding step includes the step of expanding said plastic stream radially around the second projection.

4. A process for making a corrugated plastic sleeve having an internal diameter and a circumferential rib projecting inward from the internal diameter at one end of the sleeve and an external first groove aligned with the rib, the rib being for securing said plastic sleeve to a member, the process comprising the steps of:

(a) feeding plastic into an extruder die;

(b) extruding the plastic from the extruder die as a molten plastic stream into a mold cavity having an inner wall with dimensions greater than the outside dimensions of the molten plastic stream, the inner wall

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including an end portion and a corrugated portion, the end portion including a projection extending radially inward of the mold cavity and circumferentially completely around the mold cavity; and

(c) vacuum expanding the molten plastic stream radially against the mold cavity inner wall and around the projection to form a plastic sleeve with the circumferential rib and the aligned external first groove at one end of the sleeve.

5. An apparatus for making a plastic sleeve having an internal diameter and a circumferential rib projecting inwardly from the internal diameter at one end of the sleeve and an external first groove aligned with the rib, the rib being for securing the plastic sleeve to a member having a second external groove for receiving the rib, the apparatus comprising:

an extruder die for extruding a molten plastic stream;

a mold cavity for receiving plastic from said extruder die, said mold cavity having an inner wall with dimensions greater than the outside dimensions of the molten plastic stream, a first end of said inner wall including a first projection extending radially inward

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of the mold cavity and circumferentially completely around said mold cavity; and

a vacuum system for expanding the molten plastic stream radially against the mold cavity inner wall and around the projection to form a plastic sleeve with the circumferential rib and the aligned external first groove at one end of the sleeve.

6. The apparatus of claim 5 wherein said inner wall further includes a second end and a corrugated portion between said first end and said second end.

7. The apparatus of claim 6 wherein said second end includes a second projection extending radially inward of the mold cavity and circumferentially completely around the mold cavity

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